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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/635,406

08/06/2003

Joel W. Schoenblum

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10/12/2006

SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
5030 SUGARLOAF PARKWAY
LAWRENCEVILLE, GA 30044

EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,406

Applicant(s)

SCHOENBLUM, JOEL W.

Examiner

Andy S. Rao

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-32 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 21 is/are rejected.
- 7) ☒ Claim(s) 5-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/6/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elfrig et al., (hereinafter referred to as "Elfrig") in view of Komiya et al., (hereinafter referred to as "Komiya").

Elfrig discloses an apparatus in a network for transcoding a digital stream of compressed frames, the apparatus comprising: a decoder adapted to decompress a frame having content information and non-content information included therein into the run-level domain (Elfrig: column 19, lines 15-25), wherein the content-information carried by the frame is represented in run-level domain (Elfrig: column 26, lines 10-13); a processor wherein the content-information of the frame is changed from initial content information to final content information (Elfrig: column 23, lines 45-65); and an encoder adapted to compress the frame (Elfrig: column 16, lines 45-60), as in claim 1. However, Elfrig fails to disclose that the processor is adapted to determine

Art Unit: 2621

the number of bits to shave (N_s) from the frame and adapted to process the frame in the run-level domain to reduce the compressed bit size of the frame by approximately N_s bits, as in the claim. Komiya discloses a transcoder which discloses a processor adapted to determine the number of bits to shave (N_s) from the frame and adapted to process the frame to reduce the compressed bit size of the frame by approximately N_s bits (Komiya: column 16, lines 35-45: "bits cut" process) in order to implement robust bit rate control without image quality degradation (Komiya: column 25, lines 50-60). Accordingly, given this teaching of the Komiya references, it would have been obvious for one ordinary skill in the art to incorporate the Komiya bits cut process into the Elfrig transcoder in order to have the Elfrig transcoder implement robust bit rate control without incurring image quality degradation. The Elfrig apparatus, now incorporating Komiya's bit cutter, has all of the features of claim 1.

Regarding claim 2, the Elfrig apparatus, now incorporating Komiya's bit cutter, has wherein the processor is further adapted to: (a) determine whether to requantize at least a given portion of the frame (Elfrig: column 19, lines 30-35); (b) responsive to determining to requantize at least the given portion of the frame, requantize in the run-level domain at least the given portion of the frame (Elfrig: column 26, lines 10-15); (c) determine whether to threshold at least the given portion of the frame (Elfrig: column 16, lines 45-51); and (d) responsive to determining to threshold at least the given portion of the frame, threshold in the run-level domain at least the given portion of the frame (Elfrig: column 26, lines 10-13), as in claim 2.

Regarding claim 3, the Elfrig apparatus, now incorporating Komiya's bit cutter, has wherein the frame is made up of multiple blocks arranged in a sequence, and each block is

Art Unit: 2621

represented by at least one set of run-level pairs, and the given portion of the frame is represented by at least one set of run-level pairs (Elfrig: column 24, lines 50-56), as in the claim.

Regarding claim 4, the Elfrig apparatus, now incorporating Komiya's bit cutter, has wherein the given portion of the frame is a slice of the frame, and each set of run-level pairs representing a block of the slice is processed in parallel (Elfrig: column 20, lines 1-5), as in the claim.

Regarding claim 21, the Elfrig apparatus, now incorporating Komiya's bit cutter, has wherein to determine the number of bits to shave (N_s) from the frame the processor is further adapted to: determine total size (NT) of the frame (Elfrig: column 28, lines 60-68), wherein the total size (NT) is number of bits of the frame when the frame is compressed, and wherein number of bits to shave (N_s) is defined as the difference between the total size (NT) and a desired size (ND), $N_s = NT - ND$ (Komiya: column 16, lines 35-45), as in the claim.

Allowable Subject Matter

4. Claims 5-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 22-32 are allowed.

Independent claim 22 recites "...receiving in a first bit stream a compressed frame having compressed content information and non-content information therein, the compressed frame having a first bit size (NT_1), and the compressed content information having a first bit size (CT_1); determining an approximate number of bits to shave (N_s) from the compressed frame,

Art Unit: 2621

decoding the compressed frame such that the frame is represented by initial content information formatted in sets of run-level pairs, wherein each set of run-level pairs is defined by a set of levels and an associated set of runs; associating a scan position with a level in a set of run-level pairs; decomposing the sets of run-level pairs into sets of levels and sets of runs..." which are features that are not anticipated nor obvious over the art of record. Dependent claims 23-32 are allowed for the reasons concerning the independent claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wang discloses dynamic bit allocation.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
October 5, 2006

ANDY RAO
PRIMARY EXAMINER

